



Software Error Scenario

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Context



Description: A serious error is discovered in one of the EOS Standard Products

Characteristics:

- Need to notify users who have requested the data
- Need to fix algorithm and reprocess the data
- Need to assess effects such as reprocessing of dependent data sets

Impacts:

- Need to inform large number of users of errors
- Update metadata to flag error conditions
- Support SSI&T and reprocessing as high priorities

Design Drill-Downs

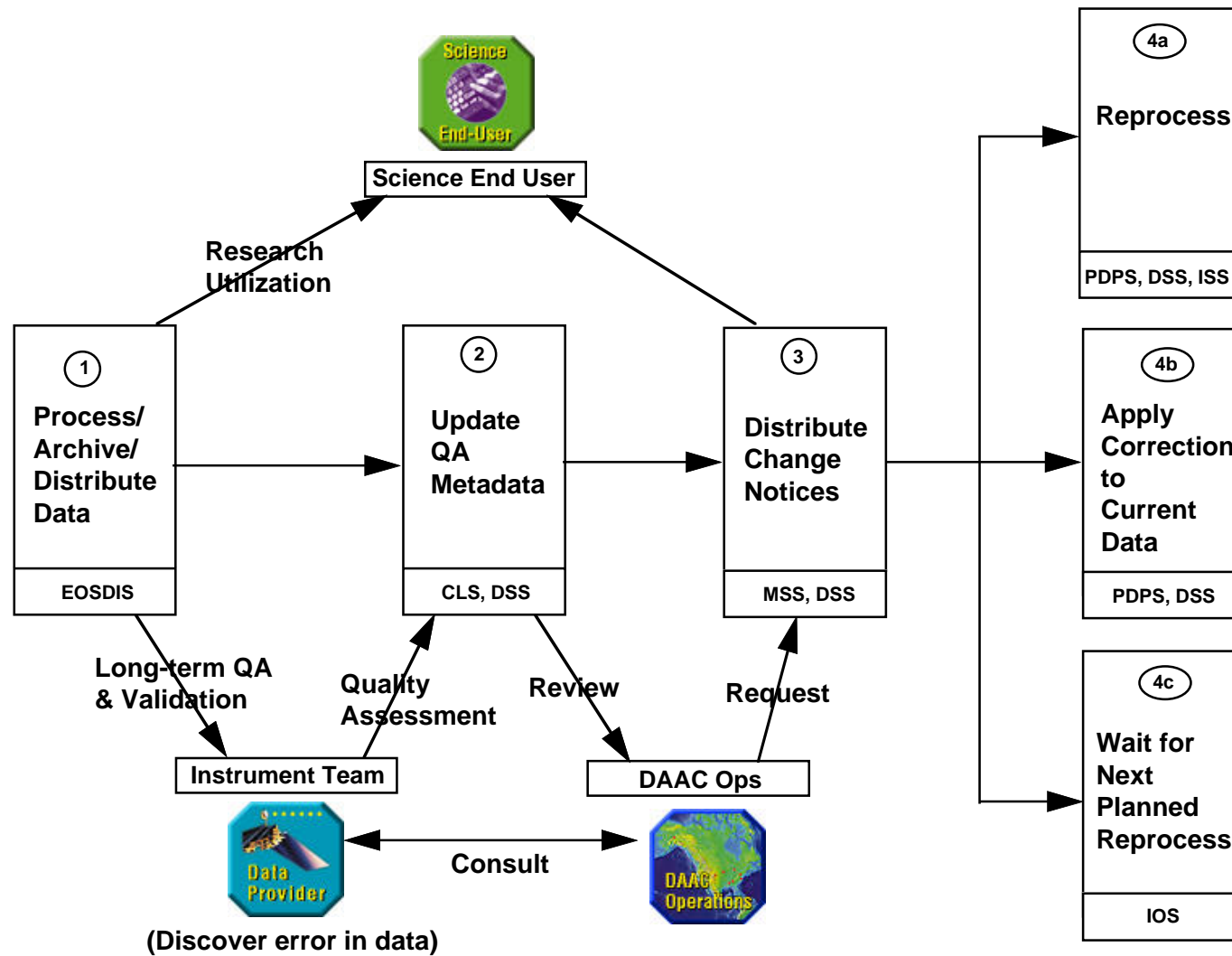


Earlier drill-downs:

- **Remote SSI&T - efficient updating of science software**
- **Science Data Processing Sizing - resources for normal processing**
- **Reprocessing Case Study - additional processing resources**
- **Adding New ESDTs and Services - supports alternate modes for correcting data errors**

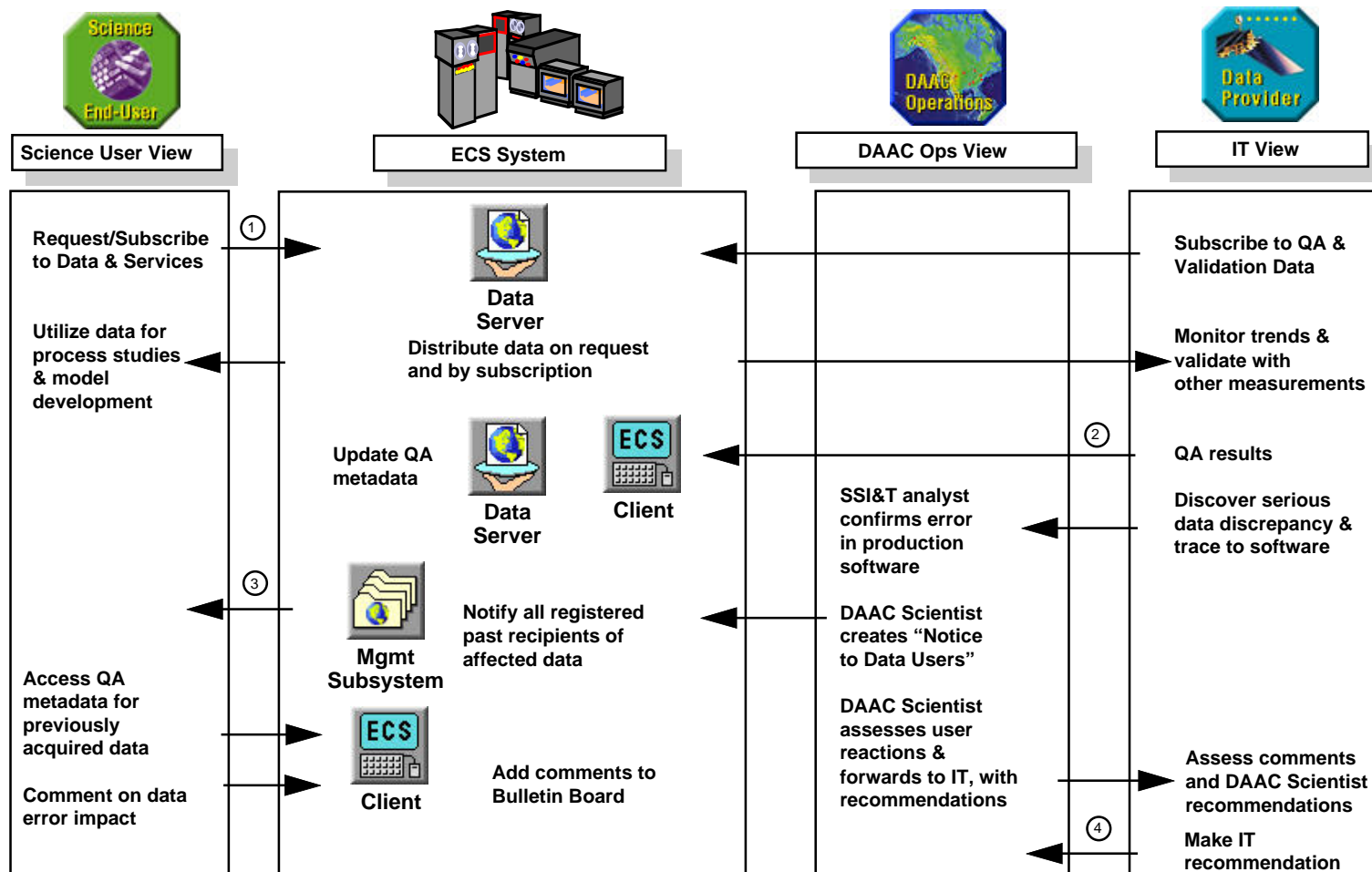
Software Error

Functional Flow

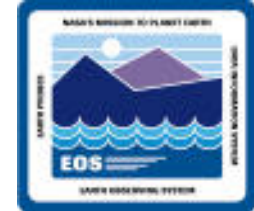


Software Error

Points of View



Error Disposition



Next step(s) depend on assessments by

- **User community - impact of error on previous and current research**
- **Instrument Team - range of affected data, options for correcting error & processing estimates**
- **Other ITs - impact on dependent products**
- **DAAC/project management - availability of resources**

Options

- ④a • **Reprocess data (incl. dependent data) starting at next lower level**
- ④b • **Develop correction to existing data (3 options)**
 - **Apply correction software to update data in archives**
 - **Apply correction software as data is ordered**
 - **Distribute correction software to users**
- ④c • **Delay reprocessing until next planned reprocessing campaign**

Summary



Design supports ops concepts for data QA / Validation

Provides mechanisms for updating metadata and distributing information back to data users

Can support all options identified in this scenario

- **Resources allocated for both processing and reprocessing**
- **Extensible ESDTs can incorporate on-demand processing at data request**
- **Bulletin Board available for distributing software to users**